PHYSICIANS

Medical Cannabis Inc / Amigula Inc works with doctors and patients worldwide to educate and advise ther legalities and procedures surrounding medical cannabis.

If you are a physician who is interested in prescribing medical cannabis, or who would like to learn more about wh

Send an email to mailto:lucky@luckypuppy.com

If you are a patient, we can help you find a doctor who is knowledgeable about medical cannabis.

Send an email to mailto:lucky@luckypuppy.com

The following article by Dr. Lester Grinspoon provides a good overview of the medical and legal issues surroundin today.

Medical Marihuana in a Time of Prohibition
International Journal of Drug Policy, April, 1999
Lester Grinspoon, M.D.

"A new scientific truth does not triumph by convincing its opponents and making them see the light, but rather bec opponents eventually die and a new generation grows up that is familiar with it."—Max Planck

The medical value of marihuana has become increasingly clear to many physicians and patients. There are three this. First, it is remarkably non-toxic. Unlike most of the medicines in the present pharmacopeia, it has never caus overdose death. Its short-term and long-term side effects are minimal compared to medicines for which it will be s Second, once patients no longer have to pay the prohibition tariff, it will be much less expensive than the medicine Third, it is remarkably versatile. Case histories and clinical experience suggest that it is useful in the treatment of r dozen symptoms and syndromes, and others will undoubtedly be discovered in the future.

As clinical evidence of marihuana's medical efficacy and safety accumulates and first-hand experience of its value more common, the discussion is turning to how it should be made available. When I first considered this issue in t

1970s, I thought the main problem was its classification in Schedule I of the Comprehensive Drug Abuse and Con 1970, which describes it as having a high potential for abuse, no accepted medical use in the United States, and l accepted safety for use under medical supervision. At that time I naively believed that a change to Schedule II wo a major obstacle, because clinical research would be possible and prescriptions would eventually be allowed.

I was the first witness at a joint meeting of the Drug Enforcement Administration and the Food and Drug Administr convened to consider a petition for rescheduling introduced by the National Organization for the Reform of Marijua 1972. At that time I had already come to believe that the greatest harm in recreational use of marihuana came not itself but from the effects of prohibition. But I saw that as a separate issue; I thought that, like opiates and cocaine could be used medically while remaining outlawed for other purposes. I also thought that once it was transferred t research on marihuana would be pursued eagerly, since it had shown such interesting therapeutic properties. Fro research we would eventually be able to determine how it should be used medicinally, how prescriptions could be who would be responsible for quality control. Twenty-five years later, I have begun to doubt this. It would be highly marihuana could be approved as a legitimate medicine within the present federal regulatory system, but it now se unlikely.

First, I should note that cannabis has already been a legally accepted medicine in the United States several times when it was dropped after the passage of the Marihuana Tax Act, it was one of the drugs listed in the U.S. Pharma had not been removed at that time, it would have been grandfathered into the Comprehensive Drug Abuse and C prescription drug, just as cocaine and morphine were. Again, in the late 1970s and early 1980s, cannabis was use by hundreds of patients (mainly in the form of synthetic tetrahydrocannabinol) in projects conducted by several of the treatment of nausea and vomiting in cancer chemotherapy. This episode ended because each state program with an enormous federal paperwork burden that was more than the physicians and administrators involved could federal government itself approved the use of cannabis as a medicine in 1976 by instituting the Compassionate IN under which physicians could obtain an individual Investigational New Drug application (IND) for a patient to recei This program too was so bureaucratically burdened that in the course of its history only about three dozen patients received marihuana, and only eight are still receiving it. When the program was discontinued permanently in 1992 Mason, the chief of the Public Health Service, gave the following reason: "If it is perceived that the Public Health S going around giving marihuana to folks, there would be a perception that this stuff can't be so bad. It gives a bad s mind doing that if there is no other way of helping these people...But there is not a shred of evidence that smoking assists a person with AIDS." In effect, this action was analogous to the recall of a prescription drug, without any ev toxic effects to support it.

Today, even transferring marihuana to Schedule II would not be enough to make it available as a prescription drug must undergo rigorous, expensive, and time-consuming tests before they are approved by the Food and Drug Adm marketing as medicines. The purpose is to protect the consumer by establishing safety and efficacy. Because no completely safe or always efficacious, an approved drug has presumably satisfied a risk-benefit analysis. When ph prescribe for individual patients they conduct an informal analysis of a similar kind, taking into account not just the safety and efficacy, but its risk and benefits for a given patient with a given condition. The formal drug approval pro to provide physicians with the information they need to make this analysis.

This system is designed to regulate the commercial distribution of drug company products and protect the public a or misleading claims about their efficacy and safety. The drug is generally a single synthetic chemical the compan developed and patented. It submits an application to the Food and Drug Administration and tests it first for safety i then for clinical efficacy and safety. The company must present evidence from double-blind controlled studies sho drug is more effective than a placebo and as effective as available drugs. Case reports, expert opinion, and clinica are not considered sufficient. The standards have been tightened since the present system was established in 196 applications that were approved in the early 1960s would be approved today on the basis of the same evidence.

Certainly we need more laboratory and clinical research to improve our understanding of medicinal cannabis. We how many patients and which patients with each symptom or syndrome are likely to find cannabis more effective t drugs. We also need to know more about its effects on the immune system in immunologically impaired patients, i with other medicines, and its possible uses for children.

But I have come to doubt whether the FDA rules should apply to cannabis. There is no question about its safety. It humanity's oldest medicines, used for thousands of years by millions of people with very little evidence of significa effects. More is known about its adverse effects than about those of most prescription drugs. The American gover conducted a decades-long multimillion-dollar research program in a futile attempt to demonstrate toxic effects that the prohibition of cannabis as a nonmedical drug. Should time and resources be wasted to demonstrate for the FD already so obvious?

As for efficacy, some believe that has been proven too, although most disagree. During the 1970s and '80s severa sponsored research projects I mentioned suggested that marihuana had advantages over both oral tetrahydrocan other medicines in the treatment of nausea and vomiting from cancer chemotherapy. But as long as the imprimatu can be given only to rigorous double-blind controlled studies, the case for marihuana has not been made. The ass a useful medicine rests almost entirely on case reports and clinical experience, just as it did in the late 19th and ea centuries.

A double-blind controlled study may be the best way to prove the relative value of a new medicine whose advanta established drugs are not obvious. But it is not the only way to demonstrate efficacy. The focus of controlled trials statistical differences in effects in groups of patients, but medicine has always been concerned mainly with individ needs can be obscured in such experiments, especially when little effort is made to identify distinctive characterist their responses. The value of case reports and clinical experience is often underestimated. They are the source of knowledge of synthetic medicines as well as plant derivatives. Controlled experiments were not needed to recogni therapeutic potential of chloral hydrate, barbiturates, aspirin, curare, or lithium. The therapeutic value of penicillin v recognized after it had been given to only six patients. Similar evidence revealed the use of propranolol for hyperte diazepam for status epilepticus, and imipramine for childhood enuresis. These drugs had originally been approved for other purposes.

As early as 1976 several small and imperfect studies, not widely known in the medical community, had shown tha day could prevent a second heart attack. In 1988 a large-scale experiment demonstrated effects so dramatic that researchers decided to stop the experiment to publish the life-saving results. On one estimate, as many as twenty deaths a year might have been prevented from the mid-1970s to the late-1980s if the medical establishment had b to recognize the value of aspirin. The lesson is suggestive: marihuana, like aspirin, is a substance known to be un and with enormous potential medical benefits. There is one contrast, however; it was impossible to be sure about aspirin on heart attacks without a long-term study involving large numbers of patients, but innumerable reports sho cannabis often brings immediate relief of suffering that can be measured in a single person.

Case histories are, in a sense, simply the smallest research studies, and the case reports on marihuana are nume persuasive. There is an experimental method known as the N-of-1 clinical trial, or the single-patient randomized tr of experiment, active and placebo treatments are administered randomly in alternation or succession to a patient. is often useful when large-scale controlled studies are impossible or inappropriate because the disorder is rare, th atypical, or the response to the treatment is idiosyncratic.

Some medical marihuana patients I know of carried out similar experiments on themselves by alternating periods use with periods of no use. They had such symptoms as nausea and vomiting, muscle spasms, compromised visi and debilitating pruritus. It is certain that cannabis won its reputation as a medicine partly because many other pat the world have carried out the same kind of experiment. Admittedly, in these experiments cannabis could not be a completely at random and there was no placebo, but in any case its psychoactive effects are usually unmistakable patients or observers could be deceived by a placebo. Case histories and other reports of clinical experience are s disparagingly dismissed as merely "anecdotal" evidence, which is said to be irrelevant because only apparent suc counted and failures are ignored. It is true that cannabis may be useful for some people with, say, multiple scleros pain, or depression, and not for others. But cannabis is so safe that if even a few patients with a given symptom c kind of relief, they should be allowed access to it.

Even if it made sense to put marihuana through the FDA process, there would be other problems in taking the cor

route to medical legitimacy. As I have mentioned, FDA procedures are designed for single chemical compounds, b is a plant material containing many chemicals. Also, it is taken chiefly by smoking, and no other drug in the preser pharmacopeia is delivered by this route. Furthermore, thousands of people are already getting relief from cannabi would not be risking severe penalties if they did not believe that it was more useful than conventional medicines. C them to put their pain and suffering on hold for years while the established procedures grind away?

Patients, their families, and others are becoming increasingly impatient for a legal means of obtaining medical can most dramatic manifestation of this impatience has been the referenda allowing distribution of medicinal cannabis been passed in several states. In 1996 California became the first state to approve such a law. Within weeks of th than a dozen cannabis clubs opened to help sick people in need of relief, and the membership of one quickly grev Many Americans believe that this is the best temporary approach to the problem of making medical cannabis avai

Among those who understand the present importance of the cannabis clubs or cooperatives, there are two views c organization. One model follows the conventional delivery system for medicine: the patient who needs medicinal c medicine) goes to the buyers club (read pharmacy) and presents a note from a physician which certifies that the p condition for which the physician recommends cannabis (read prescription) to the staff of the buyers club (read ph both the doctor and the buyers club behave responsibly and ethically, only those who have a certified need for the receive it, and those who are certified now have a reliable source. They are relieved of the anxiety of having to find street or grow their own.

In a buyers club of this kind, the patient is of course not expected to take the medicine on the premises. In contras distribution model resembles a social club more than a pharmacy. The dispensing area is plastered with menus of grades, and prices. Large rooms are filled with brightly colored posters, lounge chairs and sofas, tables, magazine newspapers. While some people remain only long enough to buy their medicine, most stay to smoke and talk. The animated conversations, laughter, music, and the pervasive pungent odor of cannabis. The atmosphere is informa and warm, providing support for patients who may be socially isolated and have little opportunity to share concern about their illnesses. This type of club is a blend of Amsterdam-style coffeehouse, American bar, and medical sup

Most people who recognize the importance of the buyers clubs believe that the first model, epitomized by the now Oakland Club, is preferable to the second model, represented by the now closed San Francisco Cultivators' Club. Francisco model, largely because of the on-site cannabis smoking and relaxed atmosphere, seems more casual i commitment to confirming medical need, and this has made even the supporters of buyers clubs a little nervous. Y importance of the social aspect cannot be underestimated. It is becoming increasingly clear that emotional suppor with and help from friends, family, co-workers, and others—plays an important role in battling illness. This support quality of life and may even prolong the life of people with various illnesses, including cancer. The San Francisco I was not designed by psychiatrists and social scientists to provide supportive group therapy, but there is reason to One of the properties of marihuana may have contributed to its effectiveness: when people use cannabis, they ter sociable and find it easier to share difficult thoughts and feelings. If there is even a kernel of truth to the idea that t the stress, setbacks, and triumphs in the battle against an illness can help a patient cope and recover, it is clear th Francisco model provides the best kind of environment for the dispensing of marihuana.

Unfortunately, even many supporters of medical cannabis regarded the language of California Proposition 215 as legal use, cultivation, and distribution of marihuana too broadly. The initiatives passed more recently in several sta more tightly drawn limitations. They will not permit cannabis clubs with the medical and psychiatric advantages of Francisco model, and they allow such a short list of medical uses that only a few of the patients who could find ma helpful will be allowed to use it. But in any case, buyers clubs have to be regarded as a stopgap measure. The fec government is not going to allow the development of a separate distribution system for one medicine. It has alreac in closing most of the California buyers clubs, and if it is as successful elsewhere, they will not long endure.

Other present approaches to making marihuana medically available have even more serious drawbacks. Marihua classified as a Schedule I drug, which means that it is legally defined as too dangerous for use even under medica But for the sake of argument, let us suppose that the government comes to its senses and marihuana is moved to This would allow investigators to do the studies which lead to FDA approval for medical use. But where will the mc

finance these studies come from? New medicines are usually introduced by drug companies, which spend an esti hundred million dollars or more on the development of each product. They are willing to undertake these costs onl they hope for large profits during the 20 years they own the patent. Obviously pharmaceutical companies cannot p marihuana and, in fact, may oppose its acceptance as a medicine because it will compete with their own products U.S. government has sufficient resources to explore medical marihuana. But its record on the matter is, to put it m reassuring. The government has opposed any loosening of restrictions on clinical research with cannabis, includin research needed for FDA approval. I believe the government will ultimately have to provide some support for this r because of public pressure, but it will arrive slowly. A study of marihuana in the treatment of the AIDS wasting syn recently been approved and funded after four years of obstruction. But this happened only because the political cli changed after the California initiative, and even so, the main subject of the study had to be changed from medical safety.

But let us suppose that studies are somehow completed showing that marihuana is safe and effective as a treatm weight reduction syndrome of AIDS, and physicians are able to prescribe it for that condition. This will present unic When a drug is approved for one medical purpose, physicians are generally free to write off-label prescriptions—tl prescribe it for other conditions as well. Dronabinol (Marinol), a synthetic form of tetrahydrocannabinol, was appro prescription drug in 1986 for the treatment of nausea and vomiting in cancer chemotherapy, and later for the treatı weight reduction syndrome of AIDS. However, presumably because it was thought to be susceptible to medically (use, it became the first FDA-approved drug for which off-label use was forbidden. The ban has proved too difficult and doctors have prescribed it off-label, although somewhat timidly. If marihuana is approved as a medicine, how concern about off-label prescriptions be dealt with?

Present state and federal schemes for making cannabis medically available invariably specify that it must be used treatment of illnesses defined as "serious", "life-threatening", "terminal", or "debilitating." Which of the many sympt syndromes for which cannabis is useful should be considered "serious?" For example, what about premenstrual s Surely women who suffer from this disorder consider it a serious problem, and many of them find that marihuana i useful treatment. What about intractable hiccups or the loss of erectile capacity in paraplegics? The people who su these rare problems know how debilitating they can be.

Generally speaking, the more dangerous a drug is, the more serious or debilitating must be the symptom or illness approved. Conversely, the more serious the health problem, the more risk is tolerated. If the benefit is very large a very small, the medicine is distributed over the counter (OTC). OTC drugs are considered so useful and safe that allowed to use their own judgment without a doctor's permission or advice. Thus, today anyone can buy and use a purpose at all. This is permissible because aspirin is considered so safe; it takes "only" one to two thousand lives United States. The remarkably versatile ibuprofen and other NSAIDs can also be purchased over the counter, bec are considered very safe; "only" 7,000 Americans lose their lives to these drugs annually. Acetaminophen, anothe drug, is responsible for about 10% of cases of end-stage renal disease. The public is also allowed to purchase ma remedies whose dangers have not been determined and which probably have only placebo effects.

Compare these drugs with marihuana. Today no one can doubt that it is, as DEA Administrative Judge Francis L. "among the safest therapeutic substances known to man." If it were now in the official pharmacopeia, it would be a contender for the title of least toxic substance in that compendium. In its long history, marihuana has never caused overdose death. Yet government schemes for its medical use are always cloaked in language suggesting that it is dangerous to be used except under the most stringent limitations. In several states, medical marihuana initiatives patients to register, and in two states they will need identification cards to protect them from arrest.

As a Schedule II drug, marihuana would be classified as having a high potential for abuse and limited medical use on these drugs are becoming tighter. Nine states now require doctors to make out prescriptions for many of them that one copy can be sent to a centralized computer system that tracks every transaction. In 1989 New York State benzodiazepines (Valium and related drugs) to the list of substances monitored in this way. Research has shown then many patients in New York who have a legitimate need for benzodiazepines are being denied them, and less effective drugs are being substituted. Increased regulation caused by fear of drug abuse has been to the disadvar than the advantage of patients.

In such situations physicians are often afraid to recommend what they know or suspect to be the best medicine be might lose their reputations, licenses, and careers. Pharmacies might be reluctant to carry marihuana as a Schedu and physicians would hesitate to prescribe it. Through computer-based monitoring, the DEA could know who was prescription marihuana and how much. It could hound physicians who by its standards prescribed cannabis too fre label purposes the government considered unacceptable. The potential for harassment would be extremely discou Unlike other Schedule II drugs such as cocaine and morphine, cannabis has many potential medical uses. Many p try to persuade their doctors that they had a legitimate claim to a prescription. Physicians would not want the resp making such decisions if they were constantly under threat of discipline by the state. A physician who prescribed r chronic pain, for example, might be subjected to the same harassment as those whom the DEA considers to be di opioids too liberally. Since the passage of the medical marihuana initiative in California, I have heard from many p say their doctors are afraid to recommend (not prescribe) marihuana because of threats from the federal governm though those threats have been declared by the courts to be legally baseless.

There is actually no case for the present restrictions—unless third-party reefer-madness anxiety counts as a risk. T II classification of cannabis would not be accurate. It does not have a high potential for abuse, and above all, it do limited medical uses. For example, a physician might sensibly and safely prescribe it for muscle spasms and chro resulting from a variety of conditions, from paraplegia to premenstrual syndrome. If the government and medical li boards insist on tight restrictions, challenging physicians as though cannabis were a dangerous drug every time it any new patient or any new purpose, there will be constant conflict with one of two outcomes: patients do not get a they should from this medicine, or they get the benefits by abandoning the legal system for the black market or the outdoor or closet gardens.

Then there is the question of who will provide the cannabis. The federal government now provides cannabis from Mississippi to eight patients who have residual Compassionate INDs. But surely the government could not or woul marihuana for many thousands of patients receiving prescriptions, any more than it does for other prescription dru production is contracted out, will the farmers have to enclose their fields with security fences? How would the mari distributed? If through pharmacies, how would they provide secure facilities capable of keeping fresh supplies? W tests are demanded for workers, how would patients who use marihuana legally as a medicine be distinguished fr use it for other (disapproved) purposes?

If the full potential of cannabis as a medicine were to be achieved in the setting of the present prohibition system, problems and more would have to be addressed. A delivery system that successfully navigated this minefield wou cumbersome, inefficient, and bureaucratically top-heavy that patients would continue to grow their own or buy it or market. The authorities could claim that a legal medical distribution apparatus existed, but most patients would fin in the same situation they are in today. The Compassionate IND program, the federal government's last scheme t needs, lasted from 1976 to 1992 but never supplied more than a few dozen patients with cannabis.

Some believe a solution to the "medical marihuana problem" (restricting the use of cannabis for medical purposes found in the isolation of individual cannabinoids, the manufacture of synthetic cannabinoids, and the development (chemical cousins of cannabinoids). Supposedly, these drugs, sometimes in combination, will make the natural pr superfluous. Their use in the form of parenterals, nasal sprays, vaporizers, skin patches, pills, and suppositories w make it unnecessary to expose the lungs to the particulate matter in marihuana smoke. Furthermore, the commer may lack psychoactive effects, which is apparently very important to some people. A pain researcher at the Memo Kettering Cancer Institute recently said that he was excited by the new analogs because "the euphoria sparked by cannabinoids…is undesirable in chronically ill patients."

Not everyone will agree that freedom from the psychoactive effects is an advantage, but some cannabinoids and a be preferable to whole smoked or ingested marihuana for other reasons. For example, cannabidiol may be more e anti-anxiety drug when it is taken without THC, which sometimes generates anxiety. Other cannabinoid analogs m occasionally prove more useful than marihuana because they can be administered intravenously. For example, los consciousness occurs in 15% to 20% of patients who suffer a thrombotic or embolic stroke, an even higher propor hemorrhagic stroke, and some who develop a brain syndrome after a severe blow to the head. The cannabinoid a dexanabinol (HU 211) has recently been shown to limit brain swelling and protect brain cells from damage in these

circumstances. It is apparently not psychoactive and can be given intravenously to an unconscious person.

The modern pharmaceutical laboratory will undoubtedly develop other cannabinoid-related products with propertie marihuana and marihuana extracts lack. There are already two known receptors for cannabinoids with different ar distributions and only partially overlapping functions. New agonists, antagonists, and inverse agonists will be deve these receptors (and possibly for others still to be discovered), some of which may have therapeutic potential. For tetrahydrocannabinol and possibly other cannabinoids enhance appetite. Perhaps pharmacologists will develop ca inverse tagonists which inhibit appetite and act as nontoxic weight reduction medicines. A better understanding of functions will also result from this kind of research.

But these encouraging developments have a worrisome downside. South American Indians have chewed the coca thousands of years with little apparent abuse and few ill effects, but since the isolation of methylbenzoylecgonine (the leaf's other natural alkaloids, some users have developed serious problems. Similarly, opium in its natural form than, say, the potent synthetic opioid fentanyl. HU 211 (dexanabinol) is not psychoactive, but its stereoisomer, HU synthesized in the same laboratory, is hundreds of times more psychoactive than THC. Other analogs may be equ The danger is that they will bear the same relationship to marihuana that fentanyl bears to opium.

There are other reasons why isolated cannabinoids and cannabinoid analogs will probably never completely displa marihuana itself as a medicine. It was once widely believed that the availability of dronabinol would make medical superfluous. Dronabinol is packed in sesame oil, partly for easier absorption, but also because it makes smoking i and therefore was thought to make nonmedical use unlikely. But patients have generally not found dronabinol to b useful as whole smoked marihuana. Even among those who judge it equally effective, many find that street marihu expensive. If the advent of prescribable dronabinol did not make marihuana medically obsolete, it is hard to believ arrival of new analogs will do so. I believe that many if not most patients who could get benefits from the new anal choose instead to smoke the more easily accessible and less expensive marihuana.

In evaluating the prospects for cannabis analogs, we must consider what a pharmaceutical product requires for ec success.

(1) It must be as useful as or more useful than competitive medicines for a particular symptom or syndrome, or it r wide variety of approved medicinal uses.

It must not have more undesirable side effects than competitive medicines.

It must have a mode of delivery which is as good as or better than available alternatives.

It must be priced competitively.
It must have a risk-benefit ratio which is at least as good as that of competitive medicines.

It must not be restrictively scheduled under the federal Comprehensive Drug Abuse and Control Act. The more res schedule, the more serious impact on marketability and the cost of development.

Now compare the anticipated analogs with whole marihuana:

Except in a few situations, such as intravenous injection in an unconscious person, analogs or combinations of an unlikely to be more useful than natural cannabis for most specific symptoms. Nor are they likely to have a much w of therapeutic uses than the natural product, which contains the cannabinoids (and synergistic combinations of ca from which the analogs are derived. In fact, one result of the development of new analogs may be to identify new for marihuana in its natural form. Shortly after dexanabinol, which is both a potent antoxidant and an NMDA antag found to protect brain cells against damage after a stroke or trauma, it was shown that THC and cannabidiol, also antoxidants, provide the same kind of protection. In fact, given the urgency of retarding the pathological process s

by a stroke or brain trauma, it may be more medically sensible to allow patients with closed head injuries to smoke accessible marihuana immediately upon regaining consciousness as they await transportation to a hospital to rece dexanabinol.

The analogs may not cause such minor side effects as inflammation of the sclera of the eyes or increased heart ra are not medically significant. Except for infrequent orthostatic hypotension (faintness on standing up), pulmonary e smoke and, in the opinion of some, the psychoactive effect (the high), marihuana has few medically significant sid

Inhalation devices now being perfected protect the lungs by separating the cannabinoids in whole marihuana from products. When these devices are manufactured in large numbers, they will provide an inexpensive, safe, and hig means of delivery. Again, except for a few situations such as unconsciousness and pulmonary impairment, it is do better means of delivery will be available for analogs.

Given the cost of development, the new analogs will be expensive. They will probably cost much more than whole marihuana even at the inflated prices imposed by the prohibition tariff. Suppose, for example, that a new analog is antinauseant comparable to the prescription drug ondansetron in effectiveness and price. Today a patient sufferin nausea of cancer chemotherapy might require one to four 8-mg ondansetron pills at $30 to $40 apiece. Many pati probably get equally effective relief from a few puffs of a marihuana cigarette—cost $5 at today's street price, 30 c marihuana is produced as a medicine.

The potential benefits of whole smoked marihuana are extraordinarily high compared to the risks. For example, th ratio of marihuana is not known because it has never caused an overdose death. It has been estimated on the bas extrapolation from animal data to be 20,000 to 40,000 to 1. Even if the therapeutic ratio of a new analog is also hig unlikely to be as safe as whole marihuana because it will be physically possible to ingest much more of the analog

Any new cannabinoid analog with psychoactive properties would presumably have to be placed in a restricted sch federal government. The Unimed Corporation, which makes dronabinol, is now attempting to have it transferred fr II to Schedule III. That would allow physicians to write prescriptions which could be refilled up to three times, reduc inconvenience and cost to the patient. Yet THC in the form of dronabinol is chemically the same as the THC in wh marihuana, which remains in Schedule I. It will become increasingly difficult to justify such inconsistencies, which regarded as hypocritical.

Ultimately, I do not believe the full potential of cannabinoids as medicines can be realized through the use of pres analogs as long as the crushing, costly prohibition on natural marihuana is maintained. Will prescription analogs b for all of the present and future medical uses of whole cannabis? If not, will off-label prescriptions of the analogs b And if prescription drugs are available, will they always be sought? For example, minor stomach upset is almost a relieved with a few puffs of cannabis. Will people suffering from this symptom go to the trouble and expense of se prescription? When it is generally appreciated that marihuana usually relieves not only gastric distress, but many c symptoms such as headache, insomnia, tension, pain and dysphoria, it may come to be regarded much as aspirin

In fact, the range of beneficial uses of marihuana is so broad that it may ultimately be wrong to single out the strict uses for approval. Many people use it not only to ease everyday discomforts, but also to heighten creativity or help work. It can serve as an intellectual stimulant, promote emotional intimacy, or enhance the appreciation of food, se beauty, music, and art. Cannabis use simply cannot be made to conform to the boundaries established by present institutions. In this case the demand for legal enforcement of a distinction between medical and nonmedical use m incompatible with the realities of human need. I know that to say this is to invite the charge that medical marihuana are only using medicine as a stalking horse for the legalization of nonmedical use. This false accusation is actually image of the view taken by enemies of marihuana. They are unwilling to admit that it can be a safe and effective m largely because they are committed to exaggerating its dangers when used for other purposes. Nevertheless, it w hypocritical to deny that there is a connection. For 28 years I have been urging the legalization of marihuana for g one time I thought medical use could be treated as a distinct issue, because even people who might never see the legalizing nonmedical use would respond to medical need. Now I have changed my mind. On the contrary, I believ marihuana fully available as a medicine is one of the reasons for general legalization.

Ideally, cannabis should be available under more or less the same rules now applied to alcohol. At present, I fear, and legal system is too ossified to accommodate that change. But I believe enforcement of the laws against marih

increasingly neglected because of the same kind of public pressure that has led to the enactment of the medical n
initiatives in five states. If I am correct, anti-marihuana statutes will come to resemble the laws against oral sex wh
in several states but are ignored so totally that most people do not even know they exist. As the number of people
possession declines, cannabis in its natural form, along with isolated cannabinoids and analogs, will be used more
medicine. As a result, the public will be in a better position to learn about its virtues, and our understanding of thos
in turn make the laws more difficult to enforce. I hope and expect that this process will bring the era of prohibition t
end. Only then will it be possible to realize the full potential of this remarkable substance, and its medical potential

A PUBLIC TRADED COMPANY - OTC: AMJL

The company was trading as APLD. The company completed a restructuring and name change to Amigula.

The company completed a reverse takeover and a reverse split.